



The Northern Sub-Area Study broke important new ground in transportation planning in metropolitan Atlanta. It developed alternative transportation investment “futures” across jurisdictional boundaries for the exploding northern Atlanta suburbs and exurbs. It documented the impact of alternative land development policies on the performance of the transportation system. It evaluated techniques to maximize the multimodal productivity of current transportation corridors. And, not the least of its accomplishments, it reflected a multi-jurisdictional effort to address systemic issues constraining the ability of the region’s transportation providers to implement and manage an effective transportation network.

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SUMMARY OF NSAS/GA 400 CORRIDOR KEY FINDINGS

Mobility – Highways and HOV lanes

- Without more investment than currently planned, congestion will get worse;
- Eliminating congestion is probably unrealistic; maintaining today's congestion levels alone will be a challenge;
- Cost-effective approaches to relieving congestion should focus on key bottleneck points;
- The effectiveness of proposed I-75 and I-85 HOV lanes can be enhanced by adding Bus Rapid Transit (BRT) and variable tolls for single-occupant autos;
- East-west highway congestion is already a key challenge that will only get worse.
- Operational improvements, such as traffic signal timing and Travel Demand Management (TDM), can benefit road performance;
- TDM can reduce travel congestion in concentrated employment areas;
- System-wide ramp metering can save freeway travel time during peak hours.

Mobility – Transit

- Investment in new transit lines on protected rights-of-way can improve transit mode share;
- The I-75, GA 400, I-85 and I-285 corridors could support fixed guideway transit;
- With improved transit services, transit travel within the Study Area will increase more than transit travel to or from the Study Area;
- Even with the most optimistic investment scenario, regional transit mode share is unlikely to exceed 14 percent; (which for comparable areas nationally is very good);
- Buses operating on HOV lanes can carry as many passengers as rail at a lower total cost;

Economic Development

- The Study Area's real estate market remains strong for future development opportunities;
- Current congestion levels have economic costs for the region;
- Congestion could dampen the economy and development growth over the next two decades;

Land Use

- Land use patterns affect transportation system performance;
- Measurable benefits result from well-integrated land use and transportation investment;
- Traffic congestion cannot be solved by changing land use patterns alone;
- Increasing land use intensity in centers and corridors increases transit trips;
- Improved urban design, e.g., improving access to transit, and improved environments for bicycling, and walking, is an important factor for linking land use and transportation;
- Implementation of the Atlanta Regional Commission's Regional Development Plan policies can result in significant environmental and travel benefits;
- A disconnect exists between approved local land use plans and the development that actually occurs;
- Plans for one jurisdiction are frequently inconsistent with those of a neighboring jurisdiction.

Environment and Equity

- The Study's recommended alternatives provide greater vehicle travel reductions and regional air quality benefits than the 2025 Regional Transportation Plan;
- Water quality/availability may be a significant constraint on future growth;
- The mobility improvements of the NSA Study alternatives benefit Environmental Justice communities.

Quality of Life

- Quality of life is a concern for residents and businesses;
- Rural, suburban, and urban residents desire and appreciate different community characteristics;
- The public understands and supports the need to raise taxes to pay for mobility improvements. The prevailing public sentiment is that those who pay the most should also receive the most benefits.

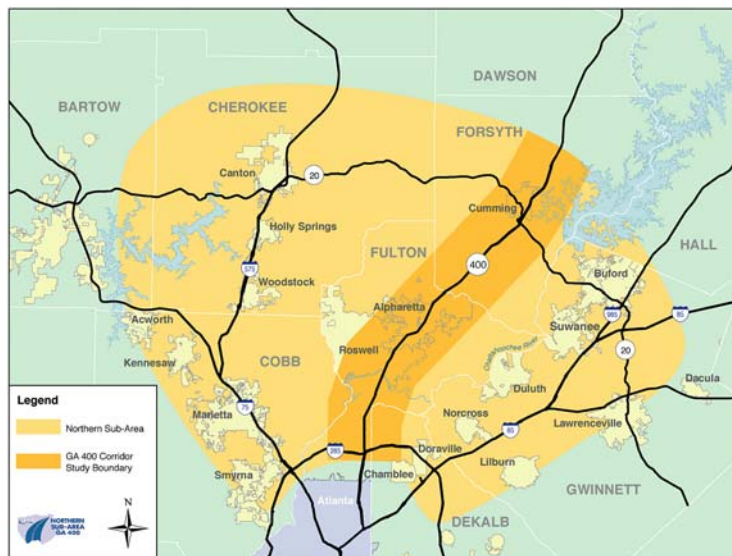
STUDY PURPOSE

In 1998, the U.S. Department of Transportation, U.S. Environmental Protection Agency, Georgia Department of Transportation (GDOT), and Atlanta Regional Commission (ARC) forged the *Atlanta Transportation Agreement*, providing a foundation for transportation and land use planning in greater Atlanta. One focus of that agreement was the GA 400 highway corridor, not part of the interstate freeway system, but a highly-traveled corridor in need of immediate improvements. The following year, Georgians for Transportation Alternatives, the Georgia Conservancy, and the Sierra Club reached a Settlement Agreement (*GTA v Shackelford*) with the transportation agencies to undertake a comprehensive sub-area study of transportation, land use, and air quality issues in the northern portion of metropolitan Atlanta. In 2001, the Georgia Regional Transportation Authority (GRTA), on behalf of the Georgia Department of Transportation and the Atlanta Regional Commission, began the process of identifying and evaluating alternative transportation “futures” for an area north of Atlanta called the Northern Sub-Area (NSA).

These agreements resulted in two studies integrated into a single contract managed by GRTA called the Northern Sub-Area Study/GA 400 Corridor Analysis (NSAS/GA

400 Study). The Northern Sub-Area Study addresses an exceptionally large study area encompassing 1,080 square miles in northern metropolitan area of Atlanta. The Study Area is that portion of the Atlanta non-attainment area bounded by I-285 on the south, and extending 3 miles beyond I-75, GA 20, and I-85 on the west, north and east, respectively. The area, shown on the map below, includes portions of six counties: Cherokee, Cobb,

DeKalb, Forsyth, Fulton, and Gwinnett. It also includes all or part of seventeen municipalities. The GA 400 Corridor Analysis study area, highlighted on the map, bisects the Northern Sub-Area and forms a focus point for mobility and economic development in the northern part of the metropolitan Atlanta area.



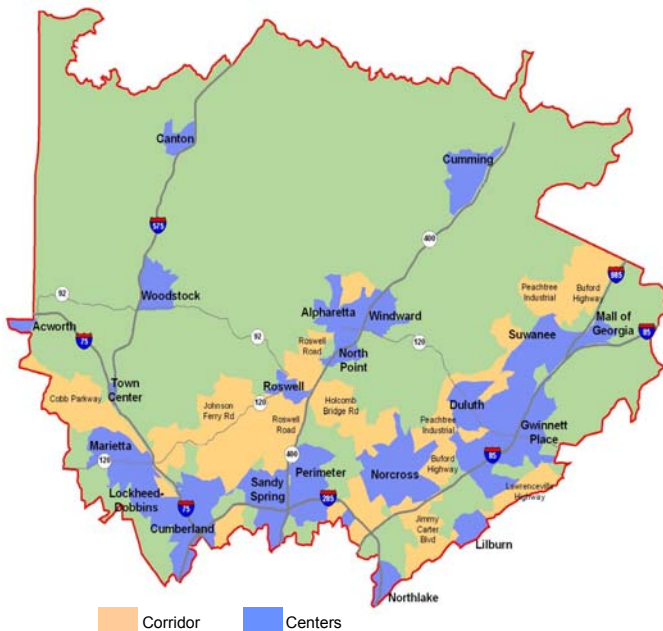
The Northern Sub-Area

The Northern Sub-Area, the “NSA”, has been referred to as the engine of the Atlanta Region’s economy, and in fact of the State as a whole. The NSA which represents over one-third of the metropolitan area’s population, households and jobs has an economic impact far out of proportion to its size. The growth rate in the NSA has substantially outpaced the rest of the region over the past two decades, attracting nearly half of the 13-county region’s population and employment growth since 1990. Importantly, many of these jobs have been in technology sector, the so called “information workers”, a group of workers strongly desired by technology-oriented metropolitan areas. However, despite its impressive growth, (or perhaps because of it), the NSA has

experienced many common problems, especially with land use patterns:

- A generally dispersed pattern of development
- Independent uses on separate parcels or developments
- Lack of interconnected, mixed-use zones
- Lack of connection between uses
- No common or consistent vision across multiple jurisdictions
- Heavily auto-dependent development pattern

Concentrations of Employment in the NSA

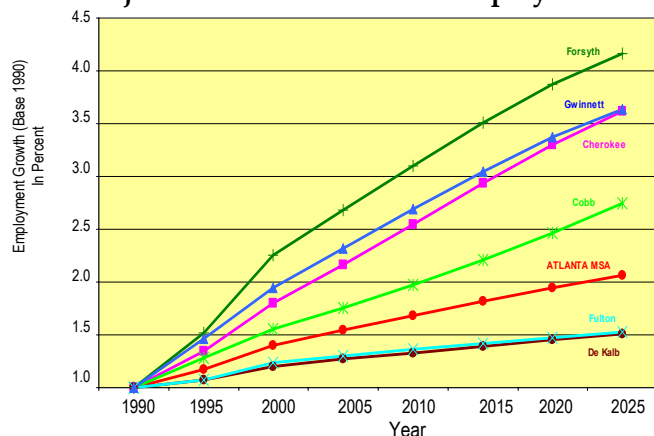


As illustrated in the figure on employment location, jobs tend to cluster around the main highway corridors, while housing is much more dispersed, a pattern that has intensified since 1990. Although considerable infill opportunities exist in the southern half of the Study Area, the bulk of growth potential (or preservation potential), lays within the northern half of the Study Area – roughly the area north of State Highways 92 and 120. Activity centers in the southern and central portions of the Study Area offer the strongest employment markets and greatest potential for attracting higher density development.

The land development patterns in the NSA are also influencing travel patterns. In the past, the dominant direction of travel in the Study Area was in the north-south direction, essentially to and from Atlanta. In the future, the greatest growth will be in east-west travel, in addition to increases in travel in the more traditional north-south direction. Most of this growth will most likely be accommodated through progressive expansion of capacity on a system of east-west arterial highways.

Throughout the course of the Study, Northern Sub-Area residents expressed concern that development, and the congestion it produces, is beginning to threaten their quality of life. The Study Area's high quality of life is one of the reasons people have moved into the Northern Sub-Area. Residents and business owners worry that their quality of life will further deteriorate in the future unless investment and development decisions change and mobility choices are expanded. The business community is aware of the cost of congestion and the impact it has on mobility and employee recruiting. Residents are particularly attuned to the increased time needed to reach destinations and to provide mobility to young and old residents. Many residents mentioned that options for walking and recreation do not exist in many areas. Young residents noted that affordable housing was not readily available in desirable urban areas near their place of work.

Projected Growth of Atlanta Employment



Source: Woods & Poole Economics, Inc.

To meet the NSA’s future development demands and address the quality of life demands of the NSA business owners and residents, the NSAS/GA 400 Study had a unique mandate. Rather than develop a single recommended plan for the Study Area, the Study was charged with recommending strategies for consideration by the Atlanta Regional Commission (ARC) in the update of the 2030 Regional Transportation Plan and developing concepts that could be incorporated into the plans and development regulations of the area’s local jurisdictions. In a sense the NSAS/GA 400 Study acted as a “proof of concept” for the ARC and local jurisdictions by investigating what concepts worked and which seemed less effective in the area. The GA 400 Corridor Analysis, in contrast to the Northern Sub-Area Study, developed a very specific set of staged recommendations for improvements to the corridor that could have a measurable impact on reducing the pervasive congestion in this corridor which splits the NSA from east to west.

Both studies were conducted under a set of mandates that required a pragmatic realism in each of the final alternatives. More specifically, each of the final alternatives in the NSA and the staged improvement program for GA 400 were to be fiscally realistic, feasible in terms of construction impacts and operations, supported by the public and elected officials, and implementable by the end of 2030.

Top 10 Strategic Themes

1. Mobility – Congestion Relief, Reliability, Transportation Choices
2. Equity Options and Choices
3. Connectivity
4. Study Area Attractiveness as a Place to Live and Work
5. Environmental Quality
6. Safety
7. Integrated Land Use
8. Existing Transportation Infrastructure Preservation
9. Funding
10. Coordinated Planning

A Steering Committee consisting of the federal, state and local government partners and representatives of the environmental community was created to provide advice and guidance to GRTA and GDOT, who managed the Study and co-chaired the Committee.

The Northern Sub-Area Study/GA 400 Corridor Analysis consisted of four phases of activity. During each phase, the Study Team incorporated public involvement activities to understand the public’s perspectives, ideas, and concerns about the NSA’s needs and the concepts being generated as part of the Study. The overall

process for the Study is illustrated on the adjoining page.

PHASE 1 – STUDY MOBILIZATION AND GA 400 CORRIDOR ANALYSIS

Phase I consisted of three primary activities.

- The Study Team held a Shared Agenda Workshop with the project’s Steering Committee and community leaders from neighborhood associations, business groups, special interest groups, and government officials. The purpose of this workshop was to identify the strategic themes and goals that would guide the study.
- The Framework Development Team, a group of local and nationally regarded experts in transportation planning, policy and economic development identified key aspects of the study design and the process of planning that would advance the state-of-the-practice of regional transportation/land use planning in the Atlanta region.

NSAS/GA 400 Corridor Study Process

STUDY MILESTONES	PUBLIC INVOLVEMENT ACTIVITIES		TIMELINE
Study Initiation <ul style="list-style-type: none"> - Define Shared Agenda - Develop Strategic Themes - Develop PIP - Conduct Needs Assessment - Identify GA 400 Near-Term Strategies 	<div>Shared Agenda Workshop</div> <div>PI Workshop</div> <div>Website Development</div> <div>Public Open Houses</div>	<div>Media</div> <div>Ongoing Steering Committee Meetings</div>	<div>Summer 2001</div> <div>Fall 2001</div>
Develop/Analysis of Scenarios <ul style="list-style-type: none"> - Develop Scenarios - Analyze Scenarios - Define 3 Conceptual Alternatives 	<div>Public Open Houses</div> <div>Focus Groups</div> <div>Stakeholder Interviews</div> <div>Website Survey</div>		<div>Winter 2001</div> <div>Spring 2002</div>
Develop/Analyze 3 Alternatives <ul style="list-style-type: none"> - Define Final 3 Alternatives - Refine Final 3 Alternatives - Analyze Final 3 Alternatives 	<div>Lifestyle Workshops</div> <div>Education on Website</div> <div>Public Open Houses</div>		<div>Summer 2002</div> <div>Fall 2002</div> <div>Winter 2002</div>
Implementation/Finance <ul style="list-style-type: none"> - Develop Alternative-Specific Strategies for Implementation, Finance, Land Use 	<div>Mayors' and Commissioners' Briefings</div> <div>Public Open Houses</div> <div>Final Public Open Houses</div>		<div>Spring 2003</div> <div>Summer 2003</div>
Final Report			<div>Fall 2003</div>

- The GA 400 Corridor Analysis identified near-term mobility strategies that could be folded into the region's Years 2003-2005 Transportation Improvement Program (TIP). This analysis resulted in a set of recommended highway intersection improvements and short term road widenings on the most congested sections of GA 400. It also recommended expanded bus services and the use of improved shoulders on GA 400 for bus operation from Windward Parkway south to the North Springs MARTA station. Many of these improvements were adopted by GDOT and acted upon before the Study was completed.

PHASE 2 – NEEDS ANALYSIS / DEVELOPMENT OF NSAS SCENARIOS

Phase 2 identified and analyzed seven distinct land use scenarios in order to obtain a better understanding of the potential impacts and benefits associated with a broad range of land use policies and related transportation improvements. A Scenario Building Workshop was held with the Steering Committee and with other stakeholders in the study area. Workshop participants identified the key themes that defined the characteristics for each of the scenarios and the planning and policy questions that each were to address. The participants then worked in teams to expand and refine the scenarios. Each scenario underwent extensive evaluation by the Study Team including each scenario's expected estimates of travel volumes on the proposed highway and transit systems, the costs of construction and operation and the likely impact on the natural and community environment.

Not surprisingly, the analysis confirmed the very significant impact that alternative patterns of land use can have on the performance of the area's transportation system. The concentration of new development along major transportation corridors was demonstrated to have a

dramatic impact on the levels of congestion on the highway system and the levels of regional auto emissions. Importantly, although different land use patterns did have varying impacts on transportation system performance, land use by itself, without parallel improvements in the capacity in these corridors, had comparatively little impact on travel times. However, higher development densities did improve transit ridership. Even with the most aggressive land use policies coupled with extensive transit improvements, however, transit mode share for work trips

Themes that Defined The Phase 2 Scenarios

1. **Current ARC Forecast** – What happens if development is spread throughout the sub-area with the greatest concentrations in the southern half of the sub-area?
2. **Existing Communities** – What happens if development is largely concentrated in and around existing communities and activity centers in the sub-area?
3. **Transit Oriented Development** – What happens if a grid-work of radial and east-west transit is developed and future land-use concentrates along these lines?
4. **Equity (East-West Corridor)** – What happens if development is further concentrated along east west corridors and transit is enhanced?
5. **Managed Growth** – What happens if much of the new growth is distributed in "hamlets" of balanced residential and commercial development in the north?
6. **Local Plans** – What happens if development occurs as anticipated in the plans of the local jurisdictions and total development is higher than projected by ARC?
7. **Less Growth** – What happens if roughly half of the development projected by ARC occurs and there is little new highway capacity added?

did not exceed 14 percent, with a much lower mode share for other trip purposes. In the GA 400 corridor, the analysis demonstrated the importance of planned HOV lanes for reducing traffic congestion in the corridor.

The scenario analysis also pointed out that the lack of affordable housing in the study area created a substantial amount of long-distance travel for those who work in the study area, but can not afford to live there.

PHASE 3 –IDENTIFICATION AND EVALUATION OF FINAL THREE ALTERNATIVES

Based on the lessons learned from the scenario analysis, Phase 3 identified and evaluated three conceptual final alternatives defined by the project's Steering Committee. These three alternatives were to be given to the Atlanta Regional Commission for its consideration in the transportation plan update process. These alternatives differed from the then current transportation plan for the study area (the 2025 Regional Transportation Plan (RTP) Limited Update) and from each other in the proposed changes to land use, road network, and transit services in the Study Area.

The biggest difference between the ARC 2025 RTP and the alternatives was the amount of funding assumed for transportation investment (federal law requires that the RTP be limited to currently foreseeable levels of funding). The alternatives examined in this Phase were based on need, and assumed that additional dollars would be found to fund the most cost effective actions over and above what was already in the ARC plan.

Another major difference was the assumed pattern of land use in the study area. All

three alternatives proposed more compact development with an emphasis on clustering higher density uses in community centers and corridors. The alternatives used the same total number of households and jobs for the study area forecast by the ARC, but assumed different patterns of distribution. By using ARC's population and employment totals the NSAS alternatives could be fairly compared with each other. One interesting finding from this analysis was that if all available developable land were developed with uses as currently designated on the local comprehensive plans, and if growth were to match the pace of the last ten years, as the communities themselves project, the NSA could conceivably exhaust its supply of non-urban land in little more than a decade! This concept is striking given that 45 percent of the Study Area, primarily in Cherokee, Forsyth, and far-north Fulton counties, is currently non-urbanized.

Quick Fact

If build-out were to occur with the uses as currently designated in the local comprehensive plans, and growth were to match the pace of the last ten years, the NSA could conceivably exhaust its supply of non-urban land in little more than a decade!

The three NSAS alternatives are as follows:

Alternative 1

Alternative 1 is most similar to regional practices and expectations, as embodied in the ARC 2025 RTP

Alternative 1, the “Needs Based” alternative, focuses on improving system performance using the ARC land use plan. It includes all of the projects in the ARC 2025 RTP. Additional transportation concepts were included based on input from the Steering Committee, public input, and lessons learned from earlier Study phases. Population and employment projections established for the ARC 2025 RTP were held constant in this alternative. Alternative 1 assumes a concentration of higher-density development around activity centers and major corridors in the southern portion of the Study Area, while continuing a predominantly low-density pattern of development in the northern portion. This alternative also assumes a balanced staging of both highway and transit projects through 2025.



Critical land use implementation practices:

- Negotiating desired density ratios with existing communities
- Planning for corridor development and redevelopment

Results

- Slightly reduces area-wide congestion
- Produces most vehicle miles traveled of the three alternatives
- Results in lowest level of total daily transit trips of the three alternatives, but slightly higher transit usage over the ARC 2025 RTP
- Produces smallest improvement in air quality
- Consumes most land
- Approaches or exceeds state limit on impervious surface in two watersheds

Commute Trip Quick Facts Alternative 1 - 2025

Average Travel Time

Highway	27.2 minutes
Transit	41.2 minutes

Average Trip Distance

Highway	11.7 miles
Transit	10.6 miles

Average Trip Cost

Highway	\$3.94
Transit	\$1.85

Alternative 1

Capital Costs (\$m)

State	\$8,583
Local	\$1,842
Total	\$10,425

Increase over ARC 2025 RTP	\$3,031
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Alternative 2

Alternative 2 reflects “full implementation” of the new ARC 2030 regional land use policies, and greater transit use than in other alternatives

Alternative 2, the “Policy-based” alternative, is based on the ARC’s proposed 2030 land use policies. It was assumed that *all new* households and jobs and *a portion of existing* households and jobs in the NSA are located in defined activity centers and transit corridors. This results in higher densities of development in the southern half of the NSA. Development at low densities in outlying and ecologically sensitive areas is minimized. Alternative 2 assumes transit improvements are implemented prior to other transportation improvements.

Critical land use implementation practices:

- Planning for corridor development and redevelopment
- Priority funding areas that guide state infrastructure funding into areas that support state “smart growth” policies
- Infrastructure bank that provides low-cost, long-term financing to local governments
- Transfer of development rights to purchase and transfer the right to develop a parcel of land to another parcel in the same jurisdiction

Alternative 2 Capital Costs (\$m)	
<i>State</i>	\$9,711
<i>Local</i>	\$1,842
<i>Total</i>	\$11,553
<i>Increase over ARC 2025 RTP</i>	\$4,158



Results

- Encourages well-defined, focused concentrations of development marked by relatively high densities and a mix of land uses
- Adds multimodal transportation facilities and changes land use patterns
- Shifts highway capacity focus to HOV lanes
- Produces the fewest vehicle miles of travel of the three alternatives
- Produces the highest transit usage, both trips and mode share
- Provides the greatest benefit to environmental justice populations
- Results in the shortest average commute time and distance of the three alternatives
- Exhibits the lowest overall travel cost with the highest system capital and yearly operating costs
- Produces better improvement in air quality than Alternative 1, but less than Alternative 3
- Consumes the least amount of land
- Approaches or exceeds the state limit on impervious surface in three watersheds, although results in the least total impervious surface for the entire NSA

Commute Trip Quick Facts Alternative 2 - 2025

Average Travel Time

Highway	25.4 minutes
Transit	39.7 minutes

Average Trip Distance

Highway	10.5 miles
Transit	10.3 miles

Average Trip Cost

Highway	\$3.56
Transit	\$1.77

Alternative 3

Alternative 3, the “Local Plan-based Alternative”, is based on the land use and transportation plans adopted by state and local agencies. No changes were made to adopted local plans. However, when given population and employment forecasts that exceeded those of the ARC, the forecasts were reduced to be consistent with the ARC 2025 forecasts.

Commute Trip Quick Facts Alternative 3 - 2025

Average Travel Time

Highway 27.3 minutes

Transit 43.8 minutes

Average Trip Distance

Highway 12.1 miles

Transit 10.7 miles

Average Trip Cost

Highway \$4.06

Transit \$1.85

Critical land use implementation practices:

- Negotiating desired density ratios with existing communities
- Requiring consistency between local zoning ordinances and adopted comprehensive plans

Alternative 3 most closely follows current land development trends.

Results:

- Reduces congestion in general purpose freeway lanes and arterials more than the other alternatives,
- Increases congestion in HOV lanes more than the other alternatives
- Requires neighboring jurisdictions to consult with each other during plan development and direct zoning and land use regulations
- Produces fewer vehicle miles of travel than Alternative 1, but more than Alternative 2
- Results in more daily transit trips than Alternative 1, but fewer than Alternative 2
- Produces least benefit to environmental justice populations
- Produces largest overall improvement in air quality of all alternatives
- Consumes less land than Alternative 1, but more than Alternative 2
- Approaches or exceeds state limit on impervious surface in two watersheds
- Has the longest average commute time and distance
- Has the highest overall average household travel cost
- Exhibits the lowest system capital and yearly operating costs

Alternative 3 Capital Costs (\$m)

State \$7,707

Local \$2,558

Total \$10,266

**Increase over
ARC 2025 RTP** \$2,871



PHASE 4 – FINANCIAL ANALYSIS AND IMPLEMENTATION OPTIONS

The Study's last phase considered concepts for implementing the transportation and land use components for each Alternative and the means of financing the transportation projects. Interviews with local land use planners provided input into the recommended land use implementation tools. Steering Committee members helped assess funding packages for those investments over what was in the existing transportation plan.

Funding the Alternatives

Quick Facts

The cost to a typical NSA family of four in added taxes needed to fund the alternatives would only be about \$1.66 per day.

The single greatest challenge is likely finding the funds to pay for the construction and operation of proposed transportation projects. Each of the alternatives exceeds the cost of the ARC 2025 RTP projects and programs for this Study Area. The ARC 2025 RTP consumes all available federal funding for the region, both for highways and transit. Thus, any funding for the additional projects that result from this study must come from either a new source of state and local funds, an increase in the levels of existing revenue sources, innovative public/private partnerships, or a redefinition of the projects in the ARC 2025 RTP to make space for newer projects.

Land Use Implementation

The most significant challenges facing implementation of the land use recommendations include:

- Supporting and achieving high density residential development
- Guiding transportation investment to support desired land use patterns
- Developing regional advocacy and leadership

East-West Improvements

Growth in east-west traffic across the Study Area is a particular challenge. This growth is anticipated to be as large as the growth in north-south traffic in the radial corridors, for which capacity expansion can be more readily accomplished.

Detailed east-west corridor studies should be undertaken to define needs and develop feasible phasing plans. Future enhancements could include access management, preservation of remaining right-of-way, transit and non-motorized travel investments, and lane additions. These improvements can be staged to provide capacity on these roads substantially above what exists today, with a minimum of disruption to the surrounding areas.



GA 400 CORRIDOR RECOMMENDATIONS

The GA 400 corridor has attracted much of the residential and employment growth in the Study Area over the past 15 years, and will continue to do so in the foreseeable future. An estimated 25 percent of the Study Area's residential population and 30 percent of its employment reside in the 220 square miles of this corridor.

This study identified several challenges in this corridor:

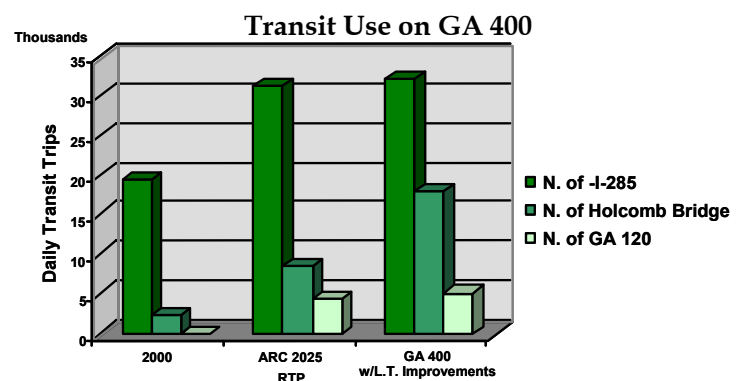
- Poor road and transit east-west connections
- Congestion at key bottleneck points
- Insufficient lane capacity on GA 400 for longer distance travel
- Few transit options
- Inadequate linkage between land use plans and transportation investment
- "Fixing" GA 400 with minimal adverse impact on neighborhoods

The GA 400 Corridor Analysis examined possible strategies for improving mobility and accessibility. The objectives of this analysis included:

- Provide earliest possible significant relief to current congestion
- Suggest recommendations that are consistent with today's financial limitations
- Minimize right-of-way takings and environmental and community impacts
- Maintain consistency with Georgia Department of Transportation and Regional Transit Action Plan (RTAP) recommendations to the extent possible

The GA 400 Corridor Analysis proposes that buses be operated with two kinds of service. First, a bus rapid transit (BRT) service, using HOV lanes, would provide service between special HOV interchange stations on GA 400 itself, similar to the operation of a rail service. Second, a number of express bus routes would operate on the arterial highways feeding into GA 400. The last stop for each route would be a park-and-ride lot near GA 400, after which the buses would then use the HOV lanes on GA 400 to head south. Both types of service would stop at the North Springs MARTA station, with several buses continuing to other major employment locations such as Cumberland/Galleria.

The GA 400 Corridor Analysis found that heavy rail and BRT both result in approximately the same number of transit riders in the corridor, measured at a point just north of I-285. At points farther north, the BRT attracts significantly more trips. Given the higher cost of extending heavy rail, the Study recommends HOV/BRT service as the more cost-effective transit strategy in the corridor. This recommendation does not preclude implementation of heavy rail beyond the time frame of this Study, that is, 25 years. The Study also concluded that one concurrent HOV lane in each direction provided the most efficient and cost effective approach to HOV construction in the corridor.



Improvements to GA 400 would be implemented in a short term (+/- 5 years), intermediate term (5-15 years), and long term (15-25 years) time horizon. This strategy allows for the implementation of cost-effective operational and site-specific strategies in the short term while working towards longer-term improvements requiring greater investment.

Key Actions to Meet Objectives

- **Make transit attractive early by providing for operations on shoulders**
- **Add SOV capacity early where needed, and principally in the median**
- **Develop concurrent rather barrier separated HOV lanes**
- **Build CD system north of I-285**
- **Develop BRT on HOV lanes rather than extending MARTA rail.**

Short-Term Improvements (+/- 5 years)

The short-term improvements in the GA 400 Corridor are strategies/actions/projects that could be accomplished within five years and that would provide important corridor mobility and accessibility benefits.

Highway Improvements:

- Build one general purpose lane in each direction in the median from Haynes Bridge Road to McFarland Road.
- Build an additional general purpose lane from Holcomb Bridge Road to Windward Parkway in the northbound direction. **(KEY ELEMENT)**
- Extend the south on-ramp to GA 400 from Holcomb Bridge Road to the Chattahoochee River.

Transit Improvements:

- Improve GA 400 shoulders from the North Springs MARTA station to Windward Parkway to allow for express bus operations. **(KEY ELEMENT)**

- Add five new express bus routes — SR 306, Cumming/Old Atlanta Road, McFarland Road, Doraville/East Roswell, and W. Roswell.
- Purchase 27 new buses.
- Build six park-and-ride lots with a total of 2,100 spaces.
- Build a new maintenance/fueling/storage bus facility.

Other Corridor Improvements:

- Widen SR 20 from GA 400 to Samples Road.
- Widen SR 141 from the Fulton County line to SR 9.
- Widen State Bridge Road from Kimball Bridge Road to SR 141.

Additionally, the Study recommends investing \$20 million to improve intersections in the corridor on major arterials that connect to GA 400. A \$2 million investment is also recommended to improve pedestrian facilities, many focused on improving access to transit stops. Additionally, the Study recommends employees, employers, and transportation management associations take advantage of the currently available travel demand management strategies and to initiate new ones.

While it is most likely that land use changes would not occur in the short term, the Study suggests several policy options that communities should consider.

Recommended Land Use Policies:

- Provide incentives to developers to locate near transit centers (e.g., allow higher densities).
- Consider existing and planned transportation services when evaluating proposed developments.
- Coordinate with adjacent jurisdictions to provide integrated development decisions.
- Encourage affordable housing near employment centers.
- Encourage walkable and bicycle-friendly developments.

Intermediate-Term Improvements (10-15 years)

Intermediate-term improvements in the GA 400 Corridor are those that can be implemented over the following 10 to 15 years. The major strategy is to convert the median lanes of GA 400 to concurrent HOV use and to turn the bus lanes on the shoulders implemented previously to general purpose lanes. GA 400 will only require one HOV lane in each direction.

Highway Improvements:

- Build general purpose lanes in the median from McFarland Road to SR 20.
- Convert shoulders to general purpose lanes from North Springs station to Windward Parkway.
- Build a southbound lane from Holcomb Bridge Road to Windward Parkway.
- Build collector-distributor (CD) system from I-285 to north of Spalding Drive. **(KEY ELEMENT)**
- Extend the Holcomb Bridge Road southbound ramp across the river to the CD system.

HOV Improvements:

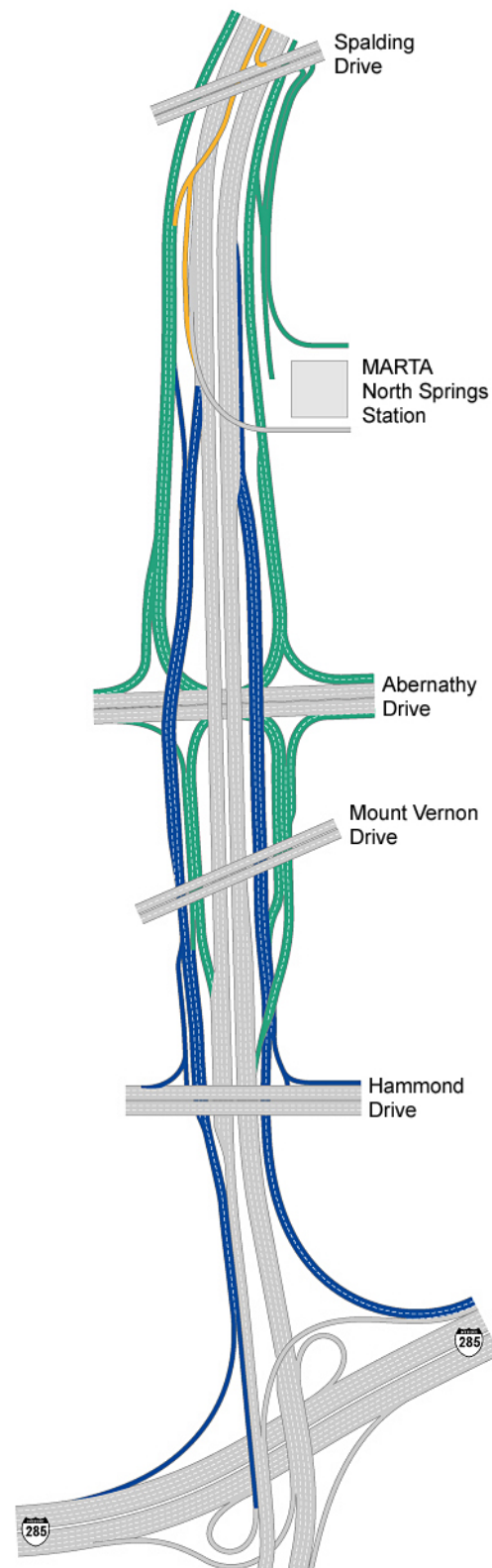
- Convert center general purpose lanes from Spalding Drive to Windward Parkway to HOV use. **(KEY ELEMENT)**
- Build concurrent HOV lanes in the median from Windward Parkway to Old Atlanta Road. **(KEY ELEMENT)**
- Build a flyover HOV ramp south from Spalding Drive to the North Springs station ramp and collector-distributor system.
- Build an access road from North Springs station to Spalding Drive and a northbound HOV on-ramp at Spalding Drive.

Transit Improvements:

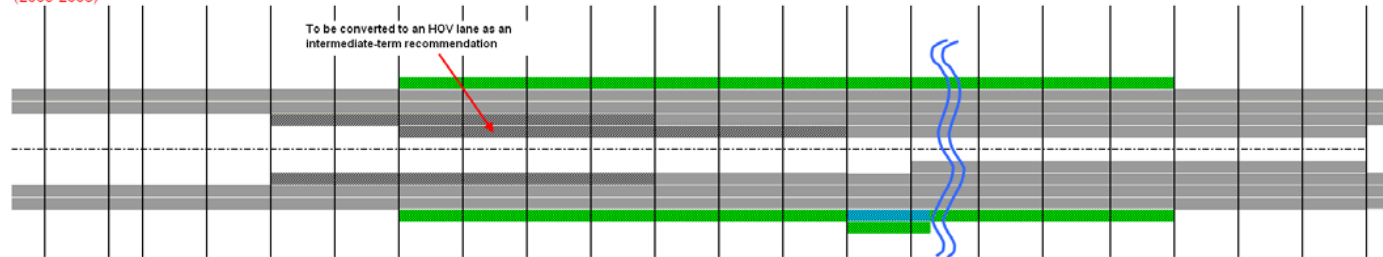
- Shift express buses to new concurrent HOV lanes from Spalding Drive to Old Alabama Road. **(KEY ELEMENT)**
- Increase service frequencies as justified by ridership.

Legend	
■	HOV Access
■	GA 400/ Arterial Access
■	GA400 /I-285 Access

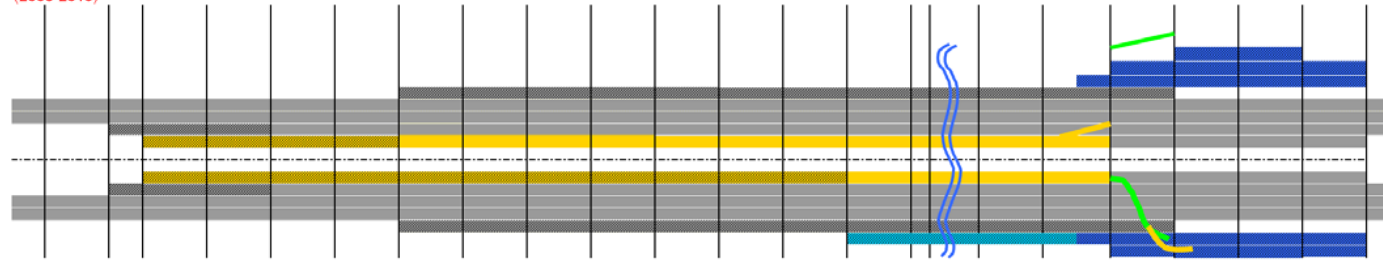
Proposed Collector-Distributor System



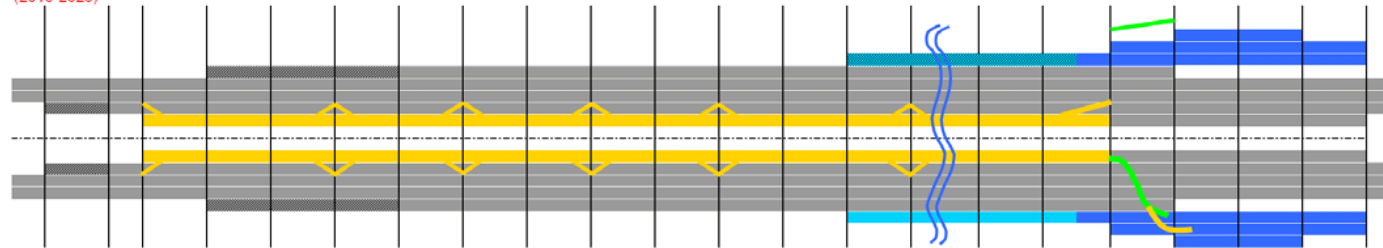
GA 400 SHORT TERM
(2003-2008)



GA 400 INTERMEDIATE TERM
(2008-2015)



GA 400 LONG TERM
(2015-2025)



Legend



GA 400 Staged Recommendations



Long-Term Improvements (15-25 years)

The long-term improvement program (over the next 15 to 25 years) is designed to enhance the BRT/HOV operations on GA 400 by building HOV-only ramps at key locations in the corridor.

HOV Improvements:

- Build HOV-only interchanges at Old Alabama Road extended, Center Bridge Road, Kimball Bridge Road, Webb Bridge Road, McGinnis Ferry Road, Old Atlanta Road. **(KEY ELEMENT)**

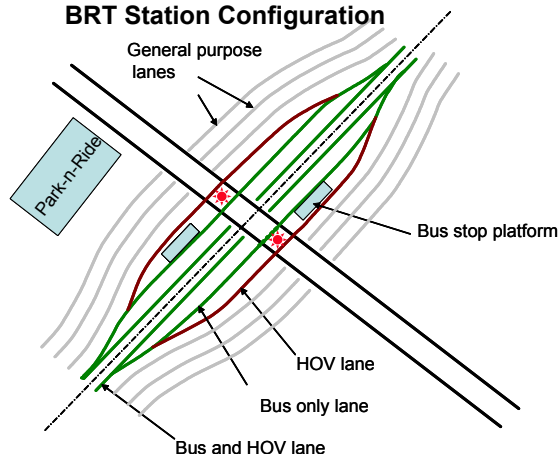
Highway Improvements:

- Complete auxiliary lane in northbound direction from CD lanes to Holcomb Bridge Road.
- Build general purpose lanes in the median in both directions from SR 20 to SR 306.
- Build general purpose lanes in the shoulder in both directions from Windward parkway to SR 141.

Transit Improvements:

- Purchase 53 buses.
- Build 4 park-and-ride lots with a total of 930 spaces.
- Add transit routes accessing HOV lanes on GA 400 HOV interchanges.
- Add BRT from Old Atlanta Road to the North Springs station stopping at HOV interchanges.
- Further increase service frequencies as justified.

Typical HOV Interchange and BRT Station Configuration



By 2025, a typical commuting motorist could save 9-18 minutes over the time it would take if none of these improvements were made. An individual who chose to carpool, vanpool or use transit would save an additional 16 minutes each way compared to a motorist who traveled alone.

While some of these improvements are already incorporated within the ARC 2025 RTP, such as the collector-distributor system, some are not and will require additional funding. The funding shortfall could be handled with numerous methods such as bonding (supported by a continuation of the current GA 400 toll agreement) and pledges of support from the community improvement districts (CIDs) in the Corridor.

Recommended GA 400 Improvements		
	Total Capital Costs In 2003 \$ m	Yearly Operating Costs
Short Term	\$63-75	\$2.4
Intermediate Term	\$267	\$3.6
Long Term	\$137-140	\$15.2

STUDY LEGACY

The Northern Sub-Area Study/GA 400 Corridor Analysis has recommended important transportation investments and land use policies that will enhance mobility in the Study Area. This study is also providing an important legacy to the region that suggests new ways that planning should be undertaken in the future, including:

- Focusing on a sub-area of the metropolitan region as a means of better understanding transportation/land use issues
- Providing a short-term improvement phase as part of corridor studies
- More strongly linking transportation and land use as part of a study's scope

- Using a team of national and local experts to provide oversight on the applicability of concepts to the Atlanta region
- Identifying potential revenue sources as part of the planning effort

Most importantly, the Study provided a detailed look at the types of strategies that the Atlanta Region should consider very carefully in future planning efforts. Notably, the combination of transportation and land use strategies, maximizing the use of existing freeway right-of-way, adopting a strong multimodal and operations focus on potential solution strategies, and better managing our existing transportation resources should be important dimensions of future transportation planning in the Region.

The Study lived the challenge of producing an integrated set of transportation and land use strategies that serves as a national model of how to address both the technical and legal context of transportation planning.

NORTHERN SUB-AREA / GA400 CORRIDOR ANALYSIS PLANNING TOOLS

In addition to the process and policy legacy describe previously, the Study leaves the Region with ten new or significantly enhanced planning tools that were developed over the course of the Study. These tools are now available for use by the ARC, GDOT, and others in the region. These planning tools include:

- GIS planning database
- A customized ARC regional travel demand forecasting model
- Travel demand management model
- Capital costing tool
- Sub-regional study area noise analysis methodology
- PLACE³S land use and development analysis tool
- Land consumption and impervious surfaces tool
- Financial analysis tool
- Performance measures procedures
- Interactive Website



The screenshot shows a website titled "How long does it take you to get to your job?" with a navigation bar including "Project Overview", "Education", "Little Red Schoolhouse", "Get Involved", "Information Center", and "Home". The main content area is divided into three columns:

- What's New:** Announces the completion of the NSAS/GA400 Study Team's look at the 1,000-square-mile Northern Sub Area, including Cherokee, Cobb, DeKalb, Forsyth, Fulton, and Gwinnett counties. The study focuses on land use, transportation alternatives, and the environment.
- Information Just Released:** Lists three new releases:
 - The Northern Sub-Area Study/GA 400 Corridor Analysis (NSAS) Final Report is complete, with a link to [View document](#).
 - The Final Project Newsletter is now complete, with a link to [Read about study findings and recommendations](#).
 - Estimated costs are now available for transportation alternatives, with a link to [How would you fund transportation improvements?](#)
- Quick Vote:** A poll titled "It will cost up to \$11 billion to pay for needed road and transit improvements in Forsyth, Cherokee, Fulton, Cobb, DeKalb, and Gwinnett Counties. What do you think would be the best way to fund these improvements?" with radio button options:
 - ☐ Retail Sales Tax
 - ☐ Income Tax
 - ☐ Gas Tax
 - ☐ Real Estate Tax
 - ☐ Development Impact Fee
 - ☐ Vehicle Ownership Fee
 A "Vote" button is located below the options.

At the bottom, there is a section titled "How would you pay for transportation improvements?" with a bar chart showing three vertical bars of increasing height. The footer includes the copyright notice: "© 2001 Copyright Parsons Brinckerhoff, Inc."

The complete report is available at www.GRTA.org